# MAXIMIZING FEDERAL IT DOLLARS:

# A CONNECTION BETWEEN IT INVESTMENTS AND ORGANIZATIONAL PERFORMANCE

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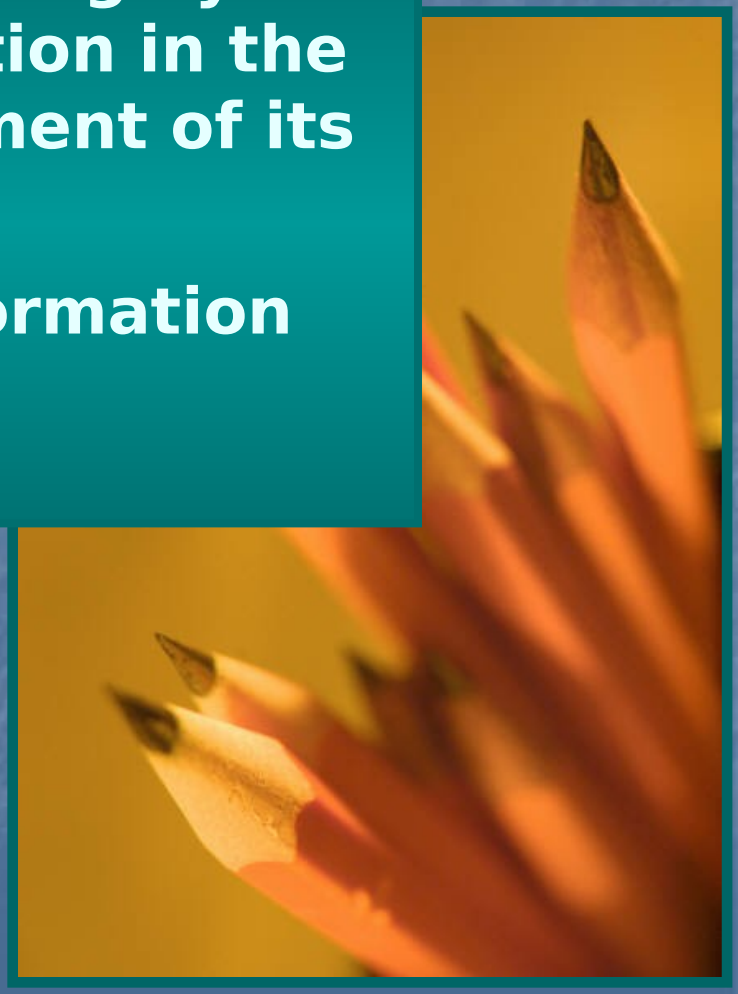
# Quotes on Federal IT Spending

**“The federal government has largely missed out on the transformation in the use of IT due to poor management of its technology investments.” [1]**

**—Vivek Kundra, U.S. Chief Information Officer**



# Introduction

**Is there a connection between the way federal government agencies invest their IT dollars and their overall agency performance?**

- Questions
- Definitions
- Methodology
- Results
- Significance

# Questions

- **Do higher performing Federal Government agencies invest in IT assets differently than lower performing agencies?**
- **Do cost-focused Federal Government agencies invest in IT assets differently than agility-focused agencies?**

**Methodology: Quantitative Research using data from Exhibit 53s and PART results**

# Definitions

**Information Technology** – "Computers, ancillary equipment, software, firmware and similar procedures, services (including support services) and related resources used by an organization to accomplish a function" [2]

**IT Investment Portfolio** – "The combination of all IT assets, resources, and investments owned or planned by an organization in order to achieve its strategic goals, objectives, and mission" [3]

**Organizational Performance** – Measured by mission effectiveness, cost reduction and efficiency, and customer satisfaction [4]

# Definitions (continued)

**Exhibit 53** – Agency IT Investment Portfolio - OMB-required annual reporting on total IT investments of all major federal departments and agencies, broken down by category, confirmed by agency CIOs and published as part of the federal budget [5]

**Program Assessment Rating Tool (PART)** – OMB assessment of all agencies, measuring performance of key agency programs [6]

# Methodology

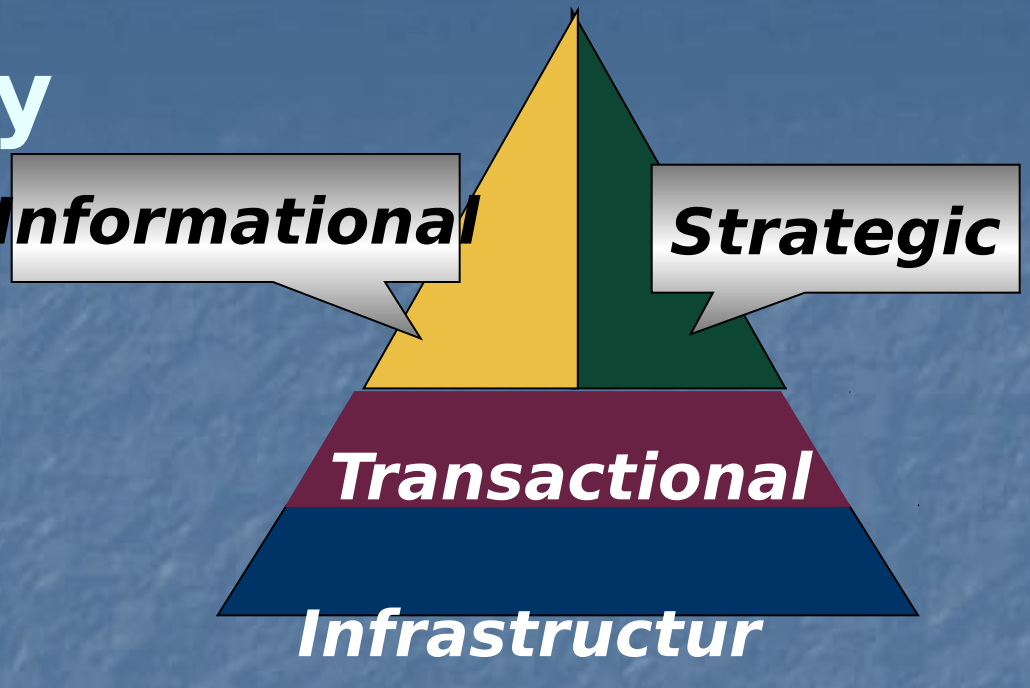
## List of Agencies

**31 Agencies Analyzed, Reduced to 30**

- Department of Agriculture
- Department of Commerce
- Department of Defense - Other
- Department of Education
- Department of Energy
- Department of Health and Human Services
- Department of Homeland Security
- Department of Housing and Urban Development
- Department of Justice
- Department of Labor
- Department of State
- Department of the Air Force
- Department of the Army
- Department of the Treasury
- Department of Transportation
- Department of Veterans Affairs
- Environmental Protection Agency
- General Services Administration
- NASA
- National Archives and Records Administration
- National Science Foundation
- Nuclear Regulatory Commission
- Office of Management and Budget
- Office of Personnel Management
- Small Business Administration
- Smithsonian Institution
- Social Security Administration
- USAID
- US Army Corps of Engineers – Civil Works

# Methodology

## Peter Weill's IT Private Sector Investment Categories [7]

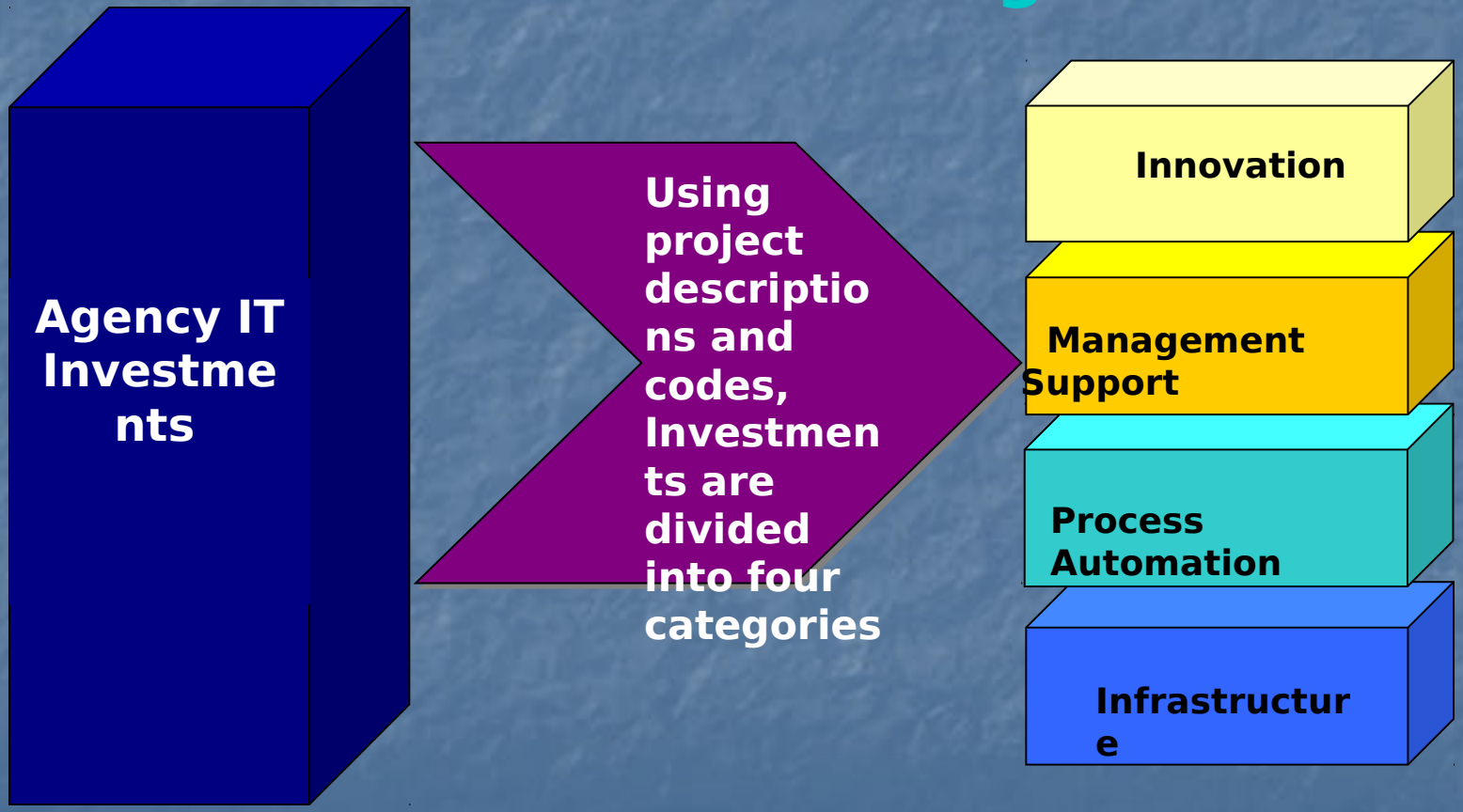



- ***Infrastructure*** – Underlying IT architecture that supports other investment categories
- ***Transactional*** – Investments that automate manual processes or increase throughput
- ***Informational*** – Investments that provide information for managing and controlling the organization
- ***Strategic*** – Investments that provide competitive advantage or position the firm in the marketplace, most often by increasing market share or sales

# Methodology

## Schedule 53s

## Government Agency IT Investment Categories



# Methodology

**Program Assessment Review Tool (PART)** Assessed over 1000 programs using 2008-2009 budget year numbers

Ranked all 30 Departments and Agencies based on their PART results

**Exhibit 53**

Analyzed over 7200 lines of investments for 2008-2009 budget

Categorized over 7200 investments into four categories for each agency

# Results

## Federal Government Agency IT Investment Portfolios – Average Investments in Each Category

| Four Categories of IT Investments | Lower Performing Agencies | Average of All Agencies | Higher Performing Agencies |
|---|---|---|---|
| Innovation | 3% | 8% | 16% |
| Management Support | 16% | 13% | 10% |
| Process Automation | 24% | 23% | 18% |
| Infrastructure | 57% | 56% | 56% |
| IT Spending as a Percentage of Overall Agency Budget | 1.68% | 2.04% | 2.87% |

Note: Funding percentages on charts are rounded

# Results

## Federal Government Agency IT Investment Portfolios – Average Investments in Each Category

| Four Categories of IT Investments | Average Agency | Cost-Focused | Agility-Focused |
|---|---|---|---|
| Innovation | 8% | 5% | 17% |
| Management Support | 13% | 16% | 5% |
| Process Automation | 23% | 30% | 21% |
| Infrastructure | 56% | 49% | 57% |
| IT Dollars as a Percentage of Overall Agency Budget | 2.04% | 0.62% | 5.89% |

# Results

## Comparing IT Investments for Private Companies and Federal Agencies by Cost-focused and Agility-

| IT Investment Means for Private Companies/Federal Agencies by Cost-focused and Agility-focused Missions | | | | | | |
|---|---|---|---|---|---|---|
| | Private Sector[8] | | | Federal Agencies | | |
| Four Categories of IT Investments | Average Company | Cost Focused | Agility Focused | Average Agency | Cost Focused | Agility Focused |
| Innovation | 13% | 5% | 17% | 8% | 5% | 17% |
| Management Support | 20% | 13% | 14% | 13% | 16% | 5% |
| Process Automation | 13% | 40% | 11% | 23% | 30% | 21% |
| Infrastructure | 54% | 42% | 58% | 56% | 49% | 57% |
| IT Dollars as a Percentage of Overall Budget | Average | 10-20% Lower than Average | 10-25% Higher than Average | 2.04% | 0.62% | 5.89% |

# Statistical Results

**Do higher performing Federal Government agencies invest in IT assets differently than lower performing agencies?**

**Statistics tell us Yes there is a significant difference between investments for the higher and lower performing agencies**

# Statistical Results

- **Do cost-focused Federal Government agencies invest in IT assets differently than agility-focused agencies?**

**Yes - Statistics tell us that agility-focused agencies spend differently than cost-focused agencies**

# Significance to your Agency

- **How can you evaluate your agency's or office's IT**

- **Analyze your Agency's Exhibit 53 and break down your IT investments into the four categories: Infrastructure, Process Automation, Management Support and Innovation using the definitions**

**The Defense Acquisition Review Journal article describes the steps in more detail**

# Significance to your Agency

- Divide IT investments into the four categories
- Compare your IT investment portfolio with the top agency averages
- Decide on adjustments to better align your agency with its mission

# Conclusion

- **Top Performing Agencies do invest differently in IT than lower performing agencies, especially in the Innovation category**

**To maximize IT Investments….**

**Compare your agency's IT investment portfolio with the top agencies' investments and consider adjustments consistent with your mission**

# Endnotes


1. Kundra, V. (2010, July 1). Cloud computing: benefits and risks of moving Federal IT into the cloud. Statement of Vivek Kundra, Federal Chief Information Officer, before the House Committee on Oversight and Government Reform. Retrieved from http://www.cio.gov/Documents/Vivek-Kundra-Testimony-Cloud-Computing_07-01-2010.pdf

2. GAO/AIMD-10.1.23, INFORMATION TECHNOLOGY INVESTMENT MANAGEMENT: A Framework for Assessing and Improving Process Maturity. May 2000. Version 1,. www.gao.gov/special.pubs/ai10123.pdf

3. Ibid.

4. Ibid.

5. OMB Circular A-11

6. Ibid.

7. P. Weill & A. Johnson, “Managing the IT Portfolio (Update Circa 2005),” Center for Information Systems Research, MIT Sloan School of Management, December 2005.

8. P. Weill & S. Aral, “IT Savvy: Achieving Industry Leading Returns from Your IT Portfolio,” Center for Information Systems Research, MIT Sloan School of Management, July 2005.